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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
10/009,456	11/05/2001	James R. Brown	GM50053	1844

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SMITHKLINE BEECHAM CORPORATION
CORPORATE INTELLECTUAL PROPERTY-US, UW2220
P. O. BOX 1539
KING OF PRUSSIA, PA 19406-0939

EXAMINER
STEADMAN, DAVID J

ART UNIT	PAPER NUMBER
1652	5

DATE MAILED: 07/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/009,456	BROWN ET AL.	
	Examiner	Art Unit	
	David J. Steadman	1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-40 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) 1-40 are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: .

DETAILED ACTION

Status of the Application

[1] Claims 1-40 are pending in the application.

[2] The numbering of claims is not in accordance with 37 CFR 1.75(c), which requires claims to be numbered consecutively. Misnumbered claims 36-42 have been renumbered according to 37 CFR 1.126 as claims 34-40.

[3] Applicant's amendment to claims 34-40 in Paper No. 3, filed November 05, 2001, is acknowledged.

[4] Receipt of Information Disclosure Statements (IDSs) filed as Paper Nos. 1 and 4 is acknowledged. A copy of each IDS will be returned in a subsequent Office action.

[5] The specification is objected to as applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119(e) as follows: An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification (37 CFR 1.78).

If applicant desires priority under 35 U.S.C. 119(e) based upon a previously filed copending application, specific reference to the earlier filed application must be made in the instant application. This should appear as the first sentence of the specification following the title, preferably as a separate paragraph. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application.

Lack of Unity

[6] Lack of unity is required under 35 U.S.C. 121 and 372. This application contains the following inventions or goups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

Group I, claim(s) 1-10, drawn to the special technical feature of an isolated polynucleotide, a vector, a host cell, and the first claimed method of use, i.e., a process for producing a polypeptide.

Group II, claim(s) 11, 12, and 15, drawn to the special technical feature of a polypeptide and the first claimed method of use, i.e., a method for the treatment of an individual in need of aroA polypeptide.

Group III, claim(s) 13, 19, and 20, drawn to the special technical feature of an antibody and a method of making an antibody by inducing an immunological response.

Group IV, claim(s) 14 and 16, drawn to the special technical feature of an antagonist of SEQ ID NO:2 and the first claimed method of use, i.e., a method for the treatment of an individual having need to inhibit aroA polypeptide.

Group V, claim(s) 21-33, drawn to the special technical feature of an antagonist that inhibits an activity of the polypeptide of SEQ ID NO:2 or 4 and the first claimed method of use, i.e., a method for the treatment of an individual having need to inhibit AroA polypeptide of SEQ ID NO:2 or 4.

Group VI, claim(s) 21-31, drawn to the special technical feature of an agonist that activates an activity of the polypeptide of SEQ ID NO:2 or 4 and the first claimed method of use, i.e., a method for the treatment of an individual having need to activate AroA polypeptide of SEQ ID NO:2 or 4.

Group VII, claim(s) 17, drawn to the special technical feature of a process for diagnosing a disease.

Group VIII, claim(s) 18, drawn to the special technical feature of a method for identifying compounds which interact with and inhibit or activate an activity of the polypeptide of SEQ ID NO:2.

Group IX, claim(s) 34-40, drawn to the special technical feature of a method for inhibiting an activity of an AroA polypeptide.

[7] The inventions listed as Groups I-IX do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical feature for the following reasons:

According to PCT Rule 13.2, unity of invention exists only when there is a shared same or corresponding special technical feature among the claimed inventions.

The polynucleotide of Group I, the polypeptide of Group II, the antibody of Group III, and the antagonist of Group IV, the antagonist of Group V, and the agonist of Group VI share no special technical feature as the polynucleotide of Group I, particularly the polynucleotide of claim 1(e), is not required for the polypeptide of Group II as the polynucleotide of Group I, particularly the polynucleotide of claim 1(e) encompasses nucleic acids that would not encode the polypeptide of Group II and instead encode polypeptides that would not elicit the antibody of Group III and would not be antagonized by the antagonist of Group IV. Furthermore, the antagonist of Group V shares no special technical feature with the antagonist of Group IV as the antagonist of Group V encompasses antagonists of SEQ ID NO:4 which would not necessarily antagonize the polypeptide of SEQ ID NO:2 of Group IV.

The polynucleotide of Group I is neither used nor made by the methods of Groups VII-IX.

The polypeptide of Group II already includes a method of use, which comprises unrelated steps to the methods of Groups VII-IX and 37 CFR 1.475 does not provide for the inclusion of multiple methods of use within the main invention.

The antibody of Group III is neither used nor made by the methods of Groups VII-IX.

The antagonist of Group IV is neither used nor made by the method of Group VII.

The antagonist of Group IV already includes a method of use, which comprises unrelated steps to the methods of Groups VIII and IX and 37 CFR 1.475 does not provide for the inclusion of multiple methods of use within the main invention.

The antagonist of Group V is neither used nor made by the method of Group VII.

The antagonist of Group V already includes a method of use, which comprises unrelated steps to the methods of Groups VIII and IX and 37 CFR 1.475 does not provide for the inclusion of multiple methods of use within the main invention.

The agonist of Group V is neither used nor made by the methods of Group VII and IX.

The agonist of Group V already includes a method of use, which comprises unrelated steps to the method of Group VIII and 37 CFR 1.475 does not provide for the inclusion of multiple methods of use within the main invention.

The methods of Groups VII-IX do not have unity of invention as the special technical feature of any one of Groups VIII-IX is not shared by the remaining groups.

[8] This application contains claims directed to more than one species of the generic invention.

These species are deemed to lack unity of invention because they are not so linked as to form a single

general inventive concept under PCT Rule 13.1. The species are as follows:

Group a, the aroA activity of synthesis of p-aminobenzoate.
Group b, the aroA activity of synthesis of ubiquinone.
Group c, the aroA activity of transformation of PEP and s3P to EPSP and Pi.
Group d, the aroA activity of transformation of EPSP and Pi to PEP and S3P.
Group e, the aroA activity of binding of AroA and PEP.
Group f, the aroA activity of binding of AroA to PEP-pyruvate kinase complex.
Group g, the aroA activity of binding of AroA to PEP-lactate dehydrogenase complex.
Group h, the aroA activity of binding of AroA and S3P.
Group i, the aroA activity of competitive inhibition of the forward reaction of AroA by glyphosate versus PEP.
Group j, the aroA activity of uncompetitive inhibition of the forward reaction of AroA by glyphosate versus S3P.
Group k, the aroA activity of competitive inhibition of the forward reaction of AroA by EPSP versus PEP.
Group l, the aroA activity of competitive inhibition of the forward reaction of AroA by EPSP versus S3P.
Group m, the aroA activity of uncompetitive inhibition of the reverse reaction of AroA by glyphosate versus EPSP.

Group n, the aroA activity of noncompetitive inhibition of the reverse reaction of AroA by glyphosaste versus Pi.
Group o, the aroA activity of competitive inhibition of the reverse reaction of AroA by S3P versus EPSP.
Group p, the aroA activity of uncompetitive inhibition of the reverse reaction of AroA by 6S3PEPSP versus S3P.

[9] The following claim(s) are generic: 21-23, 25, 26, 31-35, 37, and 39.

[10] The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons:

According to PCT Rule 13.2 and to the guidelines in Section (f)(i)(A) of Annex B of the PCT Administrative Instructions, all alternatives of a Markush Group must have a common property or activity. Each of Groups a-p is a different activity and thus, the aroA activities of Groups a-p share no special technical feature.

[11] It is noted that claims 21-35, 37, and 39 will be examined only to the extent the claims read on the elected subject matter.

[12] Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

[13] Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Steadman, whose telephone number is (703) 308-3934. The Examiner can normally be reached Monday-Thursday from 6:30 am to 5:00 pm. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Ponnathapura Achutamurthy, can be reached at (703) 308-3804. The FAX number for Group 1600 is (703) 308-4242. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Art Unit receptionist whose telephone number is (703) 308-0196.

David J. Steadman, Ph.D.
Patent Examiner
Art Unit 1652

07/09/03